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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,919	04/30/2001	Sadao Nishibori	DED-3170-3	9911

7590 05/01/2007  
David E. Dougherty  
DENISON, SCHULTZ, DOUGHERTY & MacDonald  
1727 King Street, Suite 105  
Alexandria, VA 22314

EXAMINER
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COLE, ELIZABETH M

ART UNIT	PAPER NUMBER
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1771

MAIL DATE	DELIVERY MODE
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05/01/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

09/843,919

Applicant(s)

NISHIBORI ET AL.

Examiner

Elizabeth M. Cole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,5,10,13,15,22,26,27,31,34,38,39,43,44,48-51,57,61 and 62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,5,10,13,15,22,26,27,31,34,38,39,43,44,48-51,57,61 and 62 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_.

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/12/07 has been entered.

2. Claims 1,5,13, 15, 22, 26-27, 31, 34,38-39, 43-44, 48 and 57, 61-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al, U.S. Patent No. 5,972,463 in view of Kargol et al, U.S. patent No. 5,492,662 for the reasons set forth in paragraph 3 of the previous action. Kargol teaches the alternating regions of high and low density. With regard to the particularly claimed density, since Martin et al teaches that the bulk density or void volume can be varied at col. 13, lines 55-63 and Kargol et al teach that the desired density can be obtained by adjusting the amount of fibers placed within any given zone of the mold, ( col. 2, lines 10-18), altering the density would be a result effective variable that can be adjusted by changing the amount of fiber used in the mold, and therefore, absent any unexpected results, it would have been obvious to one of ordinary skill in the art to have made the nonwoven web having a density within the claimed ranges, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. With regard to the limitation regarding the hollow filaments, Martin teaches that the web can be made from hollow filaments. With regard to the limitation that the three dimensional structure is formed by contacting, entwining and gathering adjacent ones of random loops or curls of a single component, the instant claims employ open language and therefore do not

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preclude the presence of additional components. With regard to the limitation that the filaments are made from a mixture of resins which are melted and kneaded, Martin discloses the claimed resins and that they can be formed into a blend and melt extruded. See col. 17, line 65 – col. 18, lines 55.

3. Claims 7, 10, 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin et al in view of Kargol as applied to claims above, and further in view of Insley et al, U.S. Patent No. 5,451,437 as set forth in paragraph 5 of the previous action.

4. Applicant's arguments filed 2/12/07 have been fully considered but they are not persuasive.

5. Applicant's amendments have overcome the 112 rejections.

6. With regard to the art rejection, Applicant argues that Martin does not teach a mixture which is melted and kneaded. However, as set forth above, Martin teaches at columns 17 and 18 that blends comprising the polyolefins with other polymers such as ethylene vinyl acetate can be formed into blends and melt extruded. Although Martin does teach fibers having sheath/core configurations as argued by Applicant, Martin also teaches that the sheath and/or core can comprise polymer blends and includes the claimed polymers as possible blend components. Therefore, the rejection has been maintained.

7. With regard to Kargol, Applicant argues that the Kargol employs additional elements as bonding materials which is not required in the instant claims. However, the instant claims also do not preclude additional components. Applicant argues that even if the fibers of Martin were used in the structure of Kargol, the claimed invention would not result because Martin does not

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teach the claimed fibers comprising the blend of polymers. However, as set forth above, at columns 17 and 18, Martin does teach the claimed blends. Therefore, the rejection is maintained.

8. Applicant argues that there is not motivation to select the particular proportions of EVA and polyolefin claimed and that the examiner has used improper hindsight in reaching the conclusion of obviousness. However, since the polyolefin is used in Martin as the structural material and the EVA is used as the bonding material, and since Martin wants to make an abrasive structure, it would have been obvious to have employed more of the structural material in order to form a stronger product. This is true even where the components are disposed in a blend, since the different components would still have the same functions within the blend as they would in a different structure, such as in a sheath/core structure.

9. It is suggested that claim 1 be amended to clarify that the adjective "hollow" modifies both continuous and short filaments in lines 4-5, for the sake of clarify.

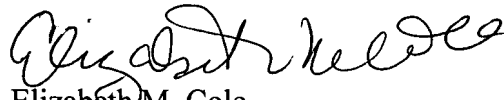
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.

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A handwritten signature in black ink, appearing to read "Elizabeth M. Cole", written in a cursive style.

Elizabeth M. Cole  
Primary Examiner  
Art Unit 1771

e.m.c